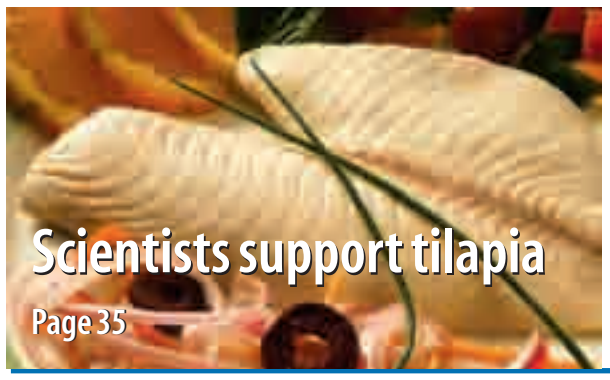

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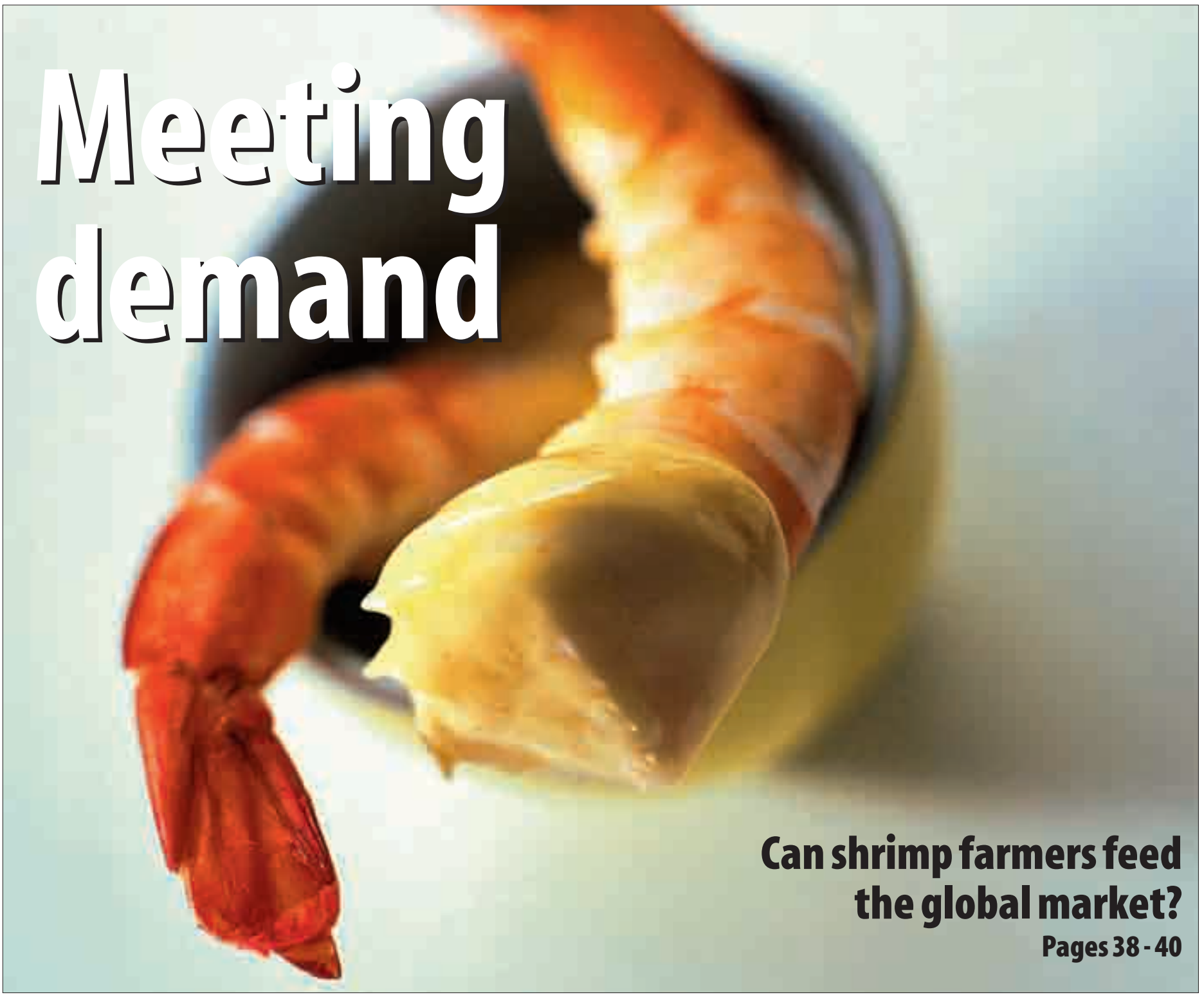
August 2008 Volume 1 Issue 3 IntraFish

Meeting demand



Can shrimp farmers feed the global market?

Pages 38 - 40

IntraFish

First in Seafood News

Tilapia producers fight back

Tired of what they say is the misinformation being put out by a book-promoting researcher in North Carolina, the fresh farmed tilapia industry is fighting back to make sure consumers know the popular whitefish is a safe and healthy food choice.

Vermont-based Tropical Aquaculture Products Inc. had its farmed tilapia tested by an independent laboratory in Florida, which found the levels of omega-6 fatty acids in its fish was well below the threshold levels cited by Wake Forest University researcher Floyd Chilton, who published a paper last month saying too much consumption of omega-6s may be harmful to some people with heart disease, arthritis and asthma.

The research paper in the July issue of the *Journal of the American Dietetic Association* said: "All other nutritional content aside, the inflammatory potential of hamburger and pork bacon is lower than the average serving of farmed tilapia."

In his book, "Inflammation Nation," Chilton says the typical American diet may contain ratios as high as 30:1 omega-6 fatty acids to omega-3 fatty acids, and says a 4-to-1 ratio would be more appropriate. About tilapia, he says the typical omega-6 to omega-3 ratio is 3-to-1.

Testing done by Tropical found the range of omega-3 to omega-6 at fish of various sizes taken from its various farm sites was — for each 100 grams — between 0.03 grams of omega-6 to 0.09 grams of omega-3 to 0.20 grams of omega-6 to 0.14 grams of omega-3. The company had more than 40 samples of its fish tested by ABC Research Corp. in Gainesville, Fla.

"What this guy is saying is just not true," said John Schramm, president of Tropical.

To combat this erroneous perception, Tropical is set this week to launch a new Web site, abouttilapia.com, that provides rebuttals to Chilton's research from other scientists, the American Heart Association, federal agencies, and the National Fisheries Institute (NFI).

The site includes health and nutrition information about tilapia, comments from scientists and researchers, news stories about tilapia, links to other Web sites that contain information about tilapia, and recipes. "Consumers need to know tilapia is a healthy fish," said Schramm.

Meanwhile, Regal Springs Tilapia is moving ahead with production for a television show about tilapia scheduled to air in the United States some time in the next month or two on the *Public Broadcasting System* public television network. The show will be distributed internationally in at least 30 countries by Voice of America, said Regal Springs President Mike Picchietti.

The omega-6 issue is being way overblown, Picchietti said, adding his company received one phone call from a concerned customer who, after hearing the facts about the healthfulness of tilapia, said he would continue buying the product.

GOOD FOR YOU: Tilapia producers are fighting back against claims in a scientific journal the fish is not a healthy food choice. PHOTO: ELITE SEAFOOD

On intrafish.com_

Take a look back

Ever wonder what happened to that hot-shot CEO after he got fired? What about the financials for the past three quarters of your biggest competitor? The latest demands from your biggest customer?

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Graphic: Erik Dyngeland

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Net notes

Pangasius: Next fishmeal source?

The 2007 exports reached 15,538 metric tons, nearly five times higher than in 2005.

Mekong Delta pangasius processor That Nam Corp. is credited with sparking the fishmeal export trend.

Japan imports 340,000 metric tons of fishmeal annually, around 44 percent of which comes from Peru.

Vietnam is now the fourth-largest supplier of fishmeal to Japan. – *Suisan Times*

More catfish trouble?

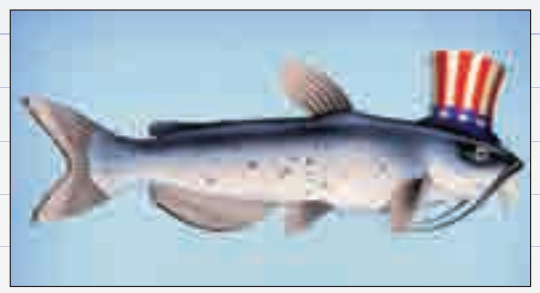


PHOTO: TCI

At press time, rumors were swirling regarding the future of Southern Pride Catfish, one of the largest catfish suppliers in the United States.

Owned by Seattle-based American Seafoods, Southern Pride, like the rest of the U.S. catfish industry, has been struggling mightily in recent years.

Southern Pride customers say company representatives are telling them a merger of some kind with Mississippi-based Heartland Catfish is being explored. Company officials at Southern Pride and Heartland weren't commenting.

Consolidation in the catfish industry is inevitable. Farmers and processors are fighting higher costs of production but not seeing significantly better returns on their fish sales.

Whether Southern Pride sells or not, the bigger story is how the catfish industry, once the shining star of the U.S. aquaculture sector, has fallen to its knees.

In the United States, where large-scale commercial aquaculture operations are hard to find, catfish has served as one example of success.

Despite all the talk of building an offshore aquaculture industry in the United States, the prospects for fish farming look dimmer than ever.

Good news on the shrimp farm

PHOTO: INTRAFISH

Indonesia's PT Central Proteinaprima (CP Prima), the world's largest shrimp producer, saw its first-half revenue spike more than 42 percent over last year.

Production rose to 48,952 metric tons in the first half, not far from the 57,000 metric tons it produced in all of 2007. The company's vice president said CP Prima could well double production over last year.

The production boom is the result of CP Prima's shrimp ponds revitalization program, which will run from 2007 to 2008. The program has modernized pond facilities and introduced new cultivation technologies, the report said.

Sales for the period rose 42.2 percent to $409 million (€263 million), with profits rising 50 percent.

Most of the company's shrimp ponds are coadministered with thousands of local shrimp farmers, under what it calls its "core-plasma" scheme.

In addition to its extensive shrimp farming activities, CP Prima produces probiotics.

1

Washington, D.C.
– A new report from the National Oceanic and Atmospheric Administration (NOAA) claims offshore fish farming would provide a huge economic benefit to the United States.

2

Santiago, Chile
-- The National Confederation of Salmon Industry Workers reached agreement with Chile's Labor Ministry to allow its workers will have more participation in the development of new labor policies.

3

Oslo, Norway
-- The minimum import price (MIP) for Norwegian salmon exported to the European Union, in place in various forms for nearly two decades, was dropped July 20.

4

Moscow, Russia
-- The Vietnam Association of Seafood Exporters and Processors says the country's catfish exports to Russia reached more than $14.3 million in June, representing a 23-fold year-on-year increase in volume.

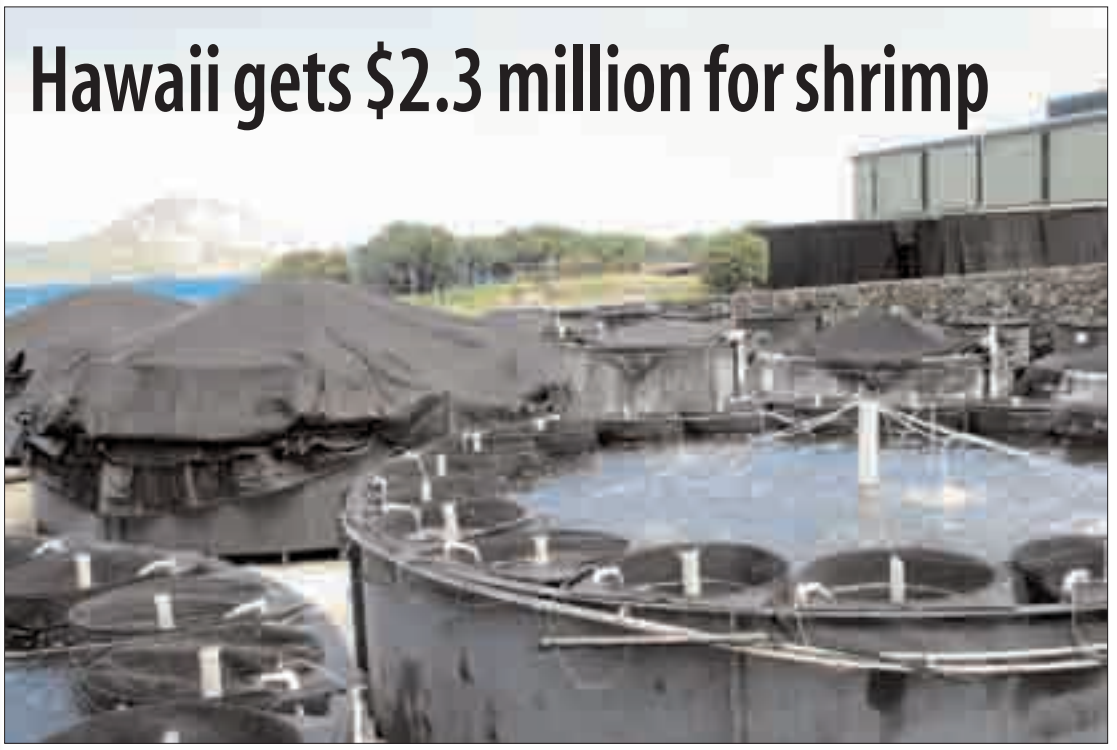
5

Miyagi, Japan
-- The first-half harvest of Japan's farmed Sanriku coho is down 15 over the same period last year to 5,873 metric tons, according to the Miyagi Fisheries Cooperative Association. Average price is up 9 percent.

6

Port Lincoln, Australia
-- Clean Seas Tuna is considering expanding its operations, even as it threatens to withdraw from Port Lincoln if mining company Centrex Metals begins using its hometown port.

Hawaii gets $2.3 million for shrimp



MORE MONEY: Will an infusionof governmetn money help boost the U.S. shrimp farming industry? PHOTO: INTRAFISH

U.S. Sen. Daniel Inouye, D-Hawaii, said last month Hawaii's Oceanic Institute was awarded a federal grant of nearly $2.3 million (€1.5 million) for shrimp aquaculture research.

"Shrimp is the No. 1 consumed seafood product in the United States at 1.4 billion pounds annually," Inouye said. "But a robust shrimp farming industry does not exist in our nation."

The grant from the Department of Agriculture is an opportunity for Hawaii and the Oceanic Institute to take a leading role in the creation of an American shrimp farming industry, he said, adding it could help reduce the country's $3.7 billion (€2.4 billion) annual trade deficit for shrimp, and help ensure the safety and quality of the nation's shrimp supply.

The U.S. Marine Shrimp Farming Program will be managed by the Oceanic Institute, an affiliate of Hawaii Pacific University.

The institute will be part of a research consortium that includes the University of Southern Mississippi's Gulf Coast Research Laboratory; Tufts University in Massachusetts; South Carolina Department of Natural Resources' Waddell Mariculture Center; Texas A&M Agriculture Experiment Station; the University of Arizona; and Nicholls State University in Louisiana.

Research will include selective breeding techniques, and high-yield production systems that must prove to be biologically, environmentally, and economically sustainable.

Chile again drags down Marine Harvest, Cermaq

Norwegian salmon farming giants Cermaq and Marine Harvest reduced their production and outlooks on continuing troubles in Chile.

BY INTRAFISH MEDIA

Cermaq said last month it is reducing results expectations for its second quarter for its fish farming operations in Chile due to ISA problems, and is taking a NOK 38 million ($7.5 million/€4.7 million) charge.

The Norway-based salmon farming company issued a trading statement reducing full-year production volume guidance by 3,000 tons, to 50,000 tons.

Due to the biological conditions for production in Chile, expected sales volumes remain uncertain for the rest of the year, the company said.

In addition to the reduced production and sales results in the second quarter, Cermaq says it will accelerate harvesting at three sites where there are outbreaks of disease. "We have a series of measures to improve the sanitary situation in Chile, and the accelerated harvesting of these sites is a part of this," said CEO Geir Isaksen.

High levels of sea lice infestation and disease such as infectious salmon anemia (ISA) have increased mortality rates and reduced average slaughter weight, Cermaq said. This led to increased production costs.

In the second quarter, the average size of Atlantic salmon harvested was 2.89 kilograms round weight, compared to 4.43 kilograms in the second quarter 2007 and 3.53 kilograms in the first quarter this year.

In the second quarter, costs were NOK 2.50 ($0.49/€0.31) higher per kilogram than in the first quarter.

"As the sales prices for small size salmon is lower than for larger sizes, the Chilean export has not benefitted from the increase in market prices for large salmon in the U.S.," the company said.

The situation in Chile is challenging and it is important for Cermaq to keep the market updated on developments, said Isaksen.

Marine Harvest, meanwhile, produced 80,000 metric tons of farmed salmon in the second quarter, down 5 percent from the prior year.

The Oslo-based firm reported flat volumes out of Norway and Canada, with slight growth in Scotland.

In Chile, where the company has been hard-hit by the infectious salmon anemia (ISA) virus, the company reported a volume decline of 21 percent from the second quarter last year.

Chile has been a huge drag on the company's earnings, and has led to massive restructuring at the company's operations.

The company said Wednesday it secured an amended financing covenant through 2009 that would give it "sufficient headroom" to restructure its Chilean operations.

Marine Harvest announced Wednesday that Frank Oren, Geir Elling Nygaard and Turid Lande Solheim were elected to its board of directors.

Chile: ISA epidemic at its peak

BY PAULA CARVAJAL

Chile's problems with infectious salmon anemia (ISA) have reached their peak, and the number of farms contaminated with the virus is expected to decline the next few months, says Felix Inostroza, director of Chile's Directorate of Fisheries (SERNAPESCA).

Inostroza and Economy Minister Hugo Lavados this week announced they will step up controls of Chile's salmon farming processes to contain ISA and other diseases that have negativekly impacted the country's salmon farming industry.

SERNAPESCA told *El Diario Financiero* it will release a resolution in the next few weeks to compel companies to treat liquid and solid industrial waste from the process of producing fish infected with ISA.

Forty-two farms have been confirmed with outbreaks of ISA since July 2007, when the disease first appeared, and 39 of these farms are in Region 10, said Inostroza.

"We're going to publish a technical regulation that lays down how to treat RILES from those plants that process fish from quarantined areas so this waste is not a source of contamination of the virus," Alicia Gallardo, head of aquaculture at SERNAPESCA, told the newspaper.

The use of chemicals and ultraviolet light are just some of the techniques companies could use to manage waste, she said.

Economy Minister Hugo Lavados said the government will implement an "outbreak traceability" system to follow up on the origin of salmon that have tested positive to ISA "to determine how the fish were infected."

The government will increase research of pathologies affecting the sector, such as pancreatic disease, that is still not present in Chile so authorities can have more knowledge of how to handle them, he said.

SERNAPESCA is preparing a report on the economic and productive effects of the disease on the domestic industry.

The government has increased SERNAPESCA's budget by over $600 million (€383 million) so far this year; nevertheless, Lavados said the actions being taken may not eradicate ISA from Chile.

Analyst: Volatile world markets have little effect on salmon

The souring of global financial markets is having little effect on salmon prices, which look to remain strong despite continuing economic turbulence, according to Landsbanki analyst Kjetil Lye.

"The supply side is too small for that to happen," Lye said. "Salmon prices often march in parallel with the wider markets. But global supplies of Atlantic salmon are so tight at the moment that prices are likely to remain buoyant." If global salmon volumes were up to their normal levels, salmon producers would be feeling the pinch from the economic slowdown much more acutely.

Disease in Chile continues to jeopardize global production, and in concert with outbreaks in Norway, remains the dominant factor in shoring up salmon prices.

Further outbreaks in Norway could ramp up prices even faster, Lye said. Norwegian officials have recently called for all of mid-Norway and south Troms county to be left fallow for a period due to infectious salmon anemia (ISA) outbreaks.

Regardless of whether improvement is made on the disease front, prices will likely climb even higher than their current level by this autumn, Lye said.

Scientists fight back against 'unhealthy' tilapia claims

Scientists aligned with the National Fisheries Institute are fighting back against claims the farmed fish is unhealthy.

BY BEN DIPIETRO

Last month, a group of scientists from around the world signed a letter refuting claims from a Wake Forest University study saying eating tilapia and catfish can be harmful to some people – and the Mayo Clinic issued its own statement touting tilapia and catfish.

A new study released in July's *Journal of the American Dietetic Association* said tilapia has more omega-6 fatty acids than omega-3 fatty acids, and this could be harmful to people with heart problems.

That is no reason to stop eating the popular fish, scientists said in their open letter issued last month.

"Tilapia and catfish are examples of lower-fat fish that have fewer omega-3s than the oily fish listed above, but still provide more of these heart-healthy nutrients than hamburger, steak, chicken, pork or turkey," said the letter signed by a coalition of 16 researchers and cardiologists from the United States, Europe and Asia.

"Actually, a three-ounce serving of these fish provides over 100 milligrams of the long chain omega-3 fatty acids EPA and DHA. Considering that this is about the current daily intake of these fatty acids in the U.S., even these fish should be considered better choices than most other meat alternatives," said the letter.

"Since they are also relatively low in total and saturated fats and high in protein, they clearly can be part of a healthy diet."

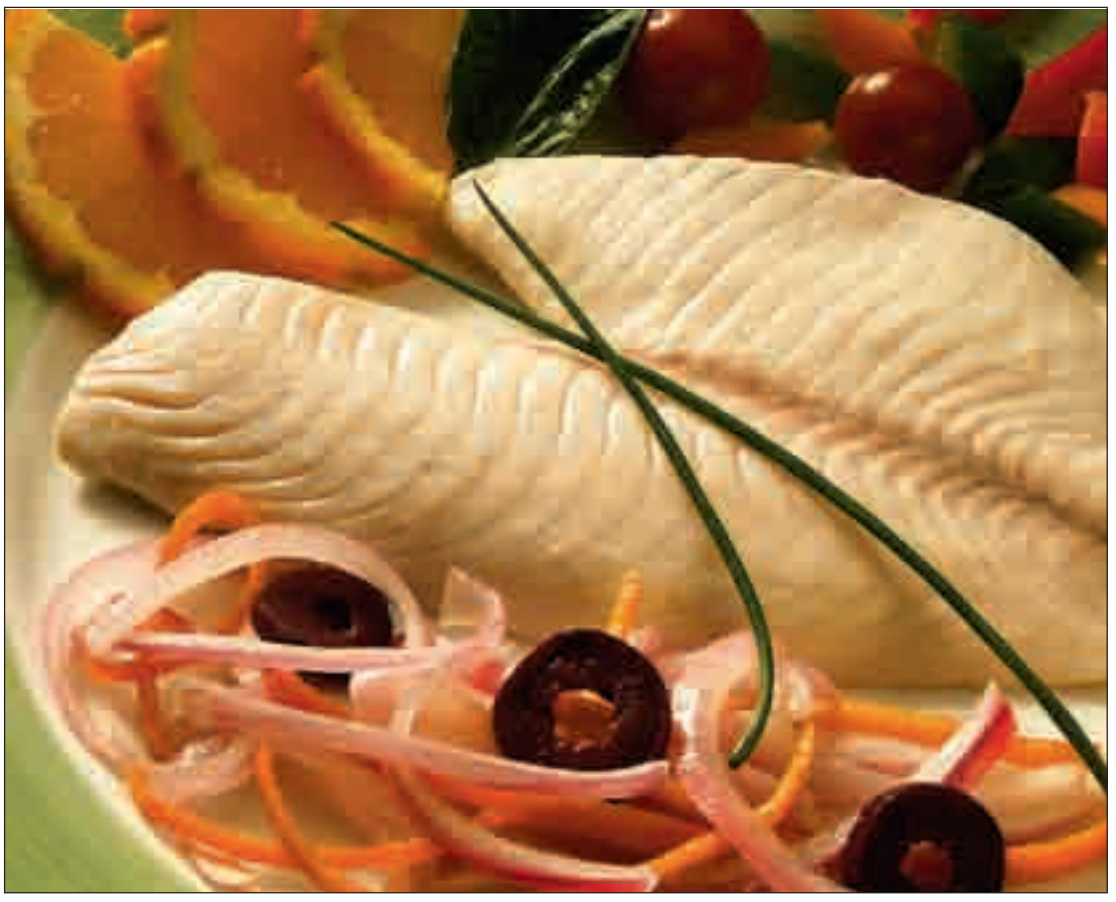
The National Institutes of Health-funded study looked at the favorable omega-3 fatty acid content and unfavorable omega-6 contents of commonly eaten fish and found while catfish and tilapia contain both, they contain a high amount of unfavorable omega-6 fat.

The Journal of the American Dietetic Association said a three-ounce portion of catfish or tilapia contains 67 and 134 milligrams, respectively, of the bad fat. The same amount of 80 percent lean hamburger contains 34 milligrams, and bacon 191 milligrams.

"Does this mean you should give them up? No! ... to think that eating catfish or tilapia – because of its high omega-6 content – is more risky in terms of heart disease than eating bacon or hamburger is flawed," said a group of Mayo Clinic dietitians.

"Replacing tilapia or catfish with "bacon, hamburgers or doughnuts" is absolutely not recommended," said the letter from the 16 scientists, who include William Harris of Sanford School of Medicine, Eric Rimm of the Harvard Schools of Medicine and Health, Clemens von Schacky of Ludwig Maximilians-University in Germany, Bruce Holub of the University of Guelph in Canada, and Yongsoon Park of Hanyang University in Korea. The National Fisheries Institute (NFI) says it's silly to think tilapia is as bad for you as a burger.

"This is all part of a reaction to sound-bite-science that has confused consumers and possibly scared some away from an inherently healthy food," said Jennifer Wilmes a registered dietitian with NFI. "Is there an on going debate in the scientific community about omega-3 to omega-6 ratios? Yes. Does that mean anyone should suggest ground beef, bacon and doughnuts are equal to or healthier than tilapia? No. That's irresponsible."



THE FISH IS ALLRIGHT: Scientists have leapt to defend tilapia as a healthy fish. PHOTO: INTRAFISH

KEEP GOING: Vietnam pangasius producers are aiming high in 2008. PHOTO: DREW CHERRY

Vietnam forecasts $1.2 billion in pangasius sales

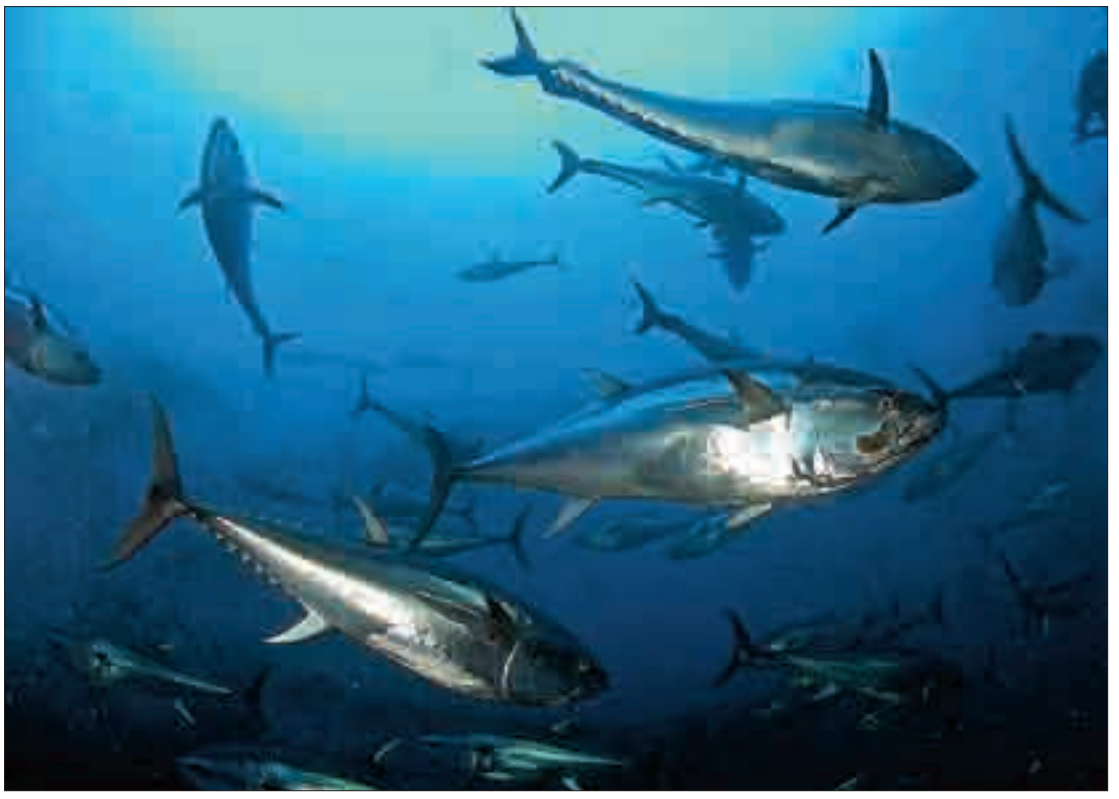
Vietnam's tra and basa catfish exports will surpass 500,000 tons this year, and revenue will exceed $1.2 billion (€758,000), says Nguyen Huu Dung of the Vietnam Association of Seafood Exporters and Processors (VASEP).

Processing enterprises in the Mekong delta are able to process big-sized tra catfish, weighing over 1.1 kilograms each, which make up 70 percent to 80 pe cent of raw material supplies, said Ngo Phuoc Hau, VASEP vice president.

The country has so far this year exported 260,000 tons of tra and basa catfish worth $610 million (€385.3 million), a year-on-year rise of 35 percent.

–Asia Pulse

Researchers breed bluefin tuna in Europe



BREAKTHROUGH: A major advance in tuna farming has researchers and industry dreaming of the day when high-output tuna farms are a reality. PHOTO: FISKAREN

Breakthrough excites researchers, industry; more research needed.

BY INTRAFISH MEDIA

World-first breeding techniques pioneered by Clean Seas Tuna Ltd. to artificially reproduce southern bluefin tuna have been successfully replicated in Europe, Australia-based Clean Seas announced.

European research consortium Allotuna reported productive spawning of Atlantic bluefin tuna – the SBT's northern cousin – using the same strategy conceived by Clean Seas earlier this year.

Allotuna's international research team, which includes Dinos Mylanos and Chris Bridges, both members of Clean Seas advisory panel, successfully collected over 10 million eggs from sea cage broodstock after hormone induction trials on a tuna farm in Italy.

The spawned eggs have been transferred to a commercial hatchery in Bari, Italy, where the larvae will feed and grow.

Eggs have been transferred to key hatcheries in France, Crete, Israel, Malta, and Spain for further rearing and research.

Bridges said the breeding breakthrough is a major boost for the fishing industry, which faces a critical shortage of bluefin tuna.

"Mediterranean bluefin tuna wild stocks are heavily threatened by overfishing, so much so that the fishery was closed earlier this year amid loud protests from the fishing industry," said Bridges.

This development represents a major breakthrough in providing commercial quantities of eggs 'on demand' for feeding into hatchery systems, said Bridges.

"Although there is much further work to do," he said, "it is clear that this technology can be applied to solve one of the major bottlenecks in the production of sustainable aquaculture for the endangered bluefin tuna."

Clean Seas Chairman Hagen Stehr was buoyed by the development in Europe and said it's a great endorsement of his company's ongoing research.

"It proves that Clean Seas Tuna is right on target with its southern bluefin tuna lifecycle project and that it is a matter of when, not if, commercialization starts," said Stehr.

In March, Clean Seas became the first organization in the world to create an artificial breeding regime for southern bluefin tuna.

The successful collection of southern bluefin tuna sperm and eggs spawned by captive tuna in the company's land-based breeding facility at Arno Bay, Australia, will allow the realization of the company's plans to close the lifecycle of southern bluefin tuna, potentially establish a valuable sperm bank and secure sustainable production of this premium endangered species.

The breeding regime is expected to give Clean Seas the ability to at least duplicate Australia's southern bluefin tuna annual quota within the next few years, and to dramatically grow the aquaculture industry on south Australia's Eyre Peninsula without impacting on wild tuna stocks.

"We are on track with our artificial breeding regime and our primary objective remains to grow out SBT fingerlings produced from our own broodstock to sizes required by the rapidly expanding world seafood markets. This will enable year round production of SBT and lower the overall cost of production," said Stehr.

"This has extraordinary benefits for Clean Seas and its shareholders in that these fish will not be subject to the strict Australian SBT wild catch quotas," he said, "in that there will also be no trade barriers for their sale into major fish markets of Japan, China, United States and the European Union, where natural fish stocks are severely depleted.

"We are confident that we will be able to emulate the success we have achieved with other aquaculture species such as yellowtail kingfish and mulloway – and in so doing reward the faith of those who have invested in our dream and those who have worked so hard to turn it into reality," said Stehr.

Australia to double aquaculture output

Australia's aquaculture industry plans to almost double production by 2015 to meet growing demand.

The chairman of the body representing the aquaculture industry says 60,000 metric tons of fish, shellfish and crustaceans are produced in Australia each year.

Craig Foster says it is hoped this can be increased to 100,000 metric tons annually.

He says this will be done through expansion of salmon operations in Tasmania, kingfish in South Australia and prawns in Queensland.

"The current production of farm prawns is about 3,200 metric tons...we believe that that will extend to about 7,000 metric tons," he said.

"We also see the barramundi industry growing. Queensland is a large part of the barramundi industry."

Australian Broadcasting Corp.

KEEPING UP WITH DEMAND: Global shrimp production has risen dramtically in the past decade, and increasing demand is expected to push production even higher in the coming years. PHOTO: DREW CHERRY

Satisfying the global craving for shrimp

Global shrimp production, farmed and wild, is up 80 percent since 1995. More growth is on the horizon.

BY KARL-ERIK STROMSTA

The global seafood trade has risen to astounding heights the past decade, and was worth $71.5 billion (€45.1 billion) in 2004, according to the United Nations.

If the seafood trade has risen quickly, the shrimp trade has exploded.

Global shrimp production reached a record-high 6.1 million metric tons in 2005, valued at $29 billion (€18.5 billion) – roughly 17 percent of seafood's total export revenues.

In the span of what seems like a short 15 years, global consumers have developed an intense and extremely valuable love affair with shrimp.

Part of the phenomenon can be attributed to greater availability.

Shrimp is overflowing from retailers' shelves and restaurant menus thanks to greater production, more efficient freezing technology and wider distribution.

Global production has grown 80 percent since 1995, and unlike many other sectors of the seafood industry that have grown only on the back of the farmed sector, wild-caught production of shrimp has gone through the roof.

Global shrimp catches have grown more than 47 percent the past decade, reaching their apex in 2005 at 35 million metric tons.

More than 60 percent of wild-caught shrimp is harvested in the Pacific Ocean, while 23 percent comes from the Atlantic Ocean.

Ramped up production certainly accounts for much of the shrimp boom, but retailers and exporters have played a major role in creating markets for all the shrimp coming through the pipeline.

The U.S. market was the first to see a colossal market for shrimp carved out, with shrimp now the most consumed seafood species.

Shrimp imports to the United States have risen 150 percent the past 10 years, and shrimp is now a ubiquitous part of the food culture, no more out of place on summertime grills than hot dogs or hamburgers.

Japan has always been a fervent consumer, but has seen its shrimp horizons stretched since the 1990s.

Now Europe – flush with the soaring euro – has overtaken both as the world's most promising market for shrimp, with growth coming from every EU member country last year except the United Kingdom.

Bumps in the road

The growth of global shrimp demand has been a tremendous success story, but the market expansion has not come without some bumps in the road.

The laundry list of problems it faces would be enough to make almost any industry fear its glory days were in the past.

For starters, two of its most important markets – the United States and Japan – saw negative growth last year as their economies sagged and their currencies slid.

The constellation of eco-labels governing the shrimp industry are disparate, and in some cases, warring. Environmental concerns within the industry are rampant, and with consumers caring more about such matters each year, scrutiny is sure to become even more intense.

Many traditional species of shrimp are proving to be unpopular and unprofitable in the context of the globalized world market.

The world's primary producers are mostly scattered in developing nations still rife with corruption and bureaucracy.

Protectionist tariffs are thrown up to coddle domestic shrimp producers, even as genuine food safety and hygiene issues regarding developing world production dance across the front pages of newspapers.

Much of the recent slump in shrimp prices can be blamed on the struggling global economy. The U.S. market saw the biggest drop in imports last year, at 5.7 percent. It was the first drop in volume seen in America in a decade.

While market conditions may be bearish, it is the ridiculously high levels of global shrimp production – once crucial to building and propping up markets – that will be the most devastating thorn in the industry's side until

it is brought back to earth.

Since 1995, global shrimp production has grown by 69 percent. At the same time, prices for shrimp have risen 5 percent.

Even as markets became saturated between 2002 and 2004, shrimp aquaculture production continued growing 28 percent. The seriousness of the widening gap between output and price cannot be overstated.

Many markets have in recent years been swamped with extremely low-priced shrimp, leaving many consumers with the impression it will forever be so. With the cost of production rising rapidly, many farmers and fishermen are finding themselves losing money on ever kilo they produce.

Shrimp is no longer the world's most valuable traded seafood product, having lost the title to salmon.

Just as the shrimp industry would be wise to let go of some of its past success, so too it must not be overly pessimistic about its future.

The recent price contraction has forced the industry to get smarter and leaner.

There is far more emphasis on value-added products than ever before, and even countriessuch ase India, once known only as a mass-volume exporter, have committed themselves to growing their VAP sector.

Producers are narrowing their sites on only the most profitable species and techniques, allowing obsolete farming practices and species fade into the background. For the most part, that has meant a focus on vannamei, or white shrimp, though black tiger shrimp still remains profitable in many countries.

Together, the two farmed species hit 2.5 million metric tons of production in 2005 – more than 40 percent of the global farmed total.

Consolidation has begun to reshape the industry. China, Indonesia, India, Thailand and Vietnam – the world's top five shrimp producing countries – accounted for 72 percent of global production in 2005, and such a narrowing is likely to intensify.

Corporations now control large swaths of the industry where once there were only patchworks of small-size farmers with no connection to or knowledge of the global market.

"We're coming into an era of professionalism, where amateurs and gold seekers won't get involved," said Robins McIntosh, senior vice president of Thailand's largest shrimp exporter, CP Foods. The industry has greatly improved its methods, allowing companies to use less antibiotics and still get better yields, and believes a slowdown in total global production will help boost prices and ensure better environmental conditions, McIntosh said. "Production will match consumption, price will stabilize, and we'll see an increase in price to farms," she said.

TRADING PARTNERS: Trade barriers continue to play a major role in the global shrimp trade, and are one of the primary reasons for the market's continued volatility.

PHOTO: VELO MITROVICH

Markets

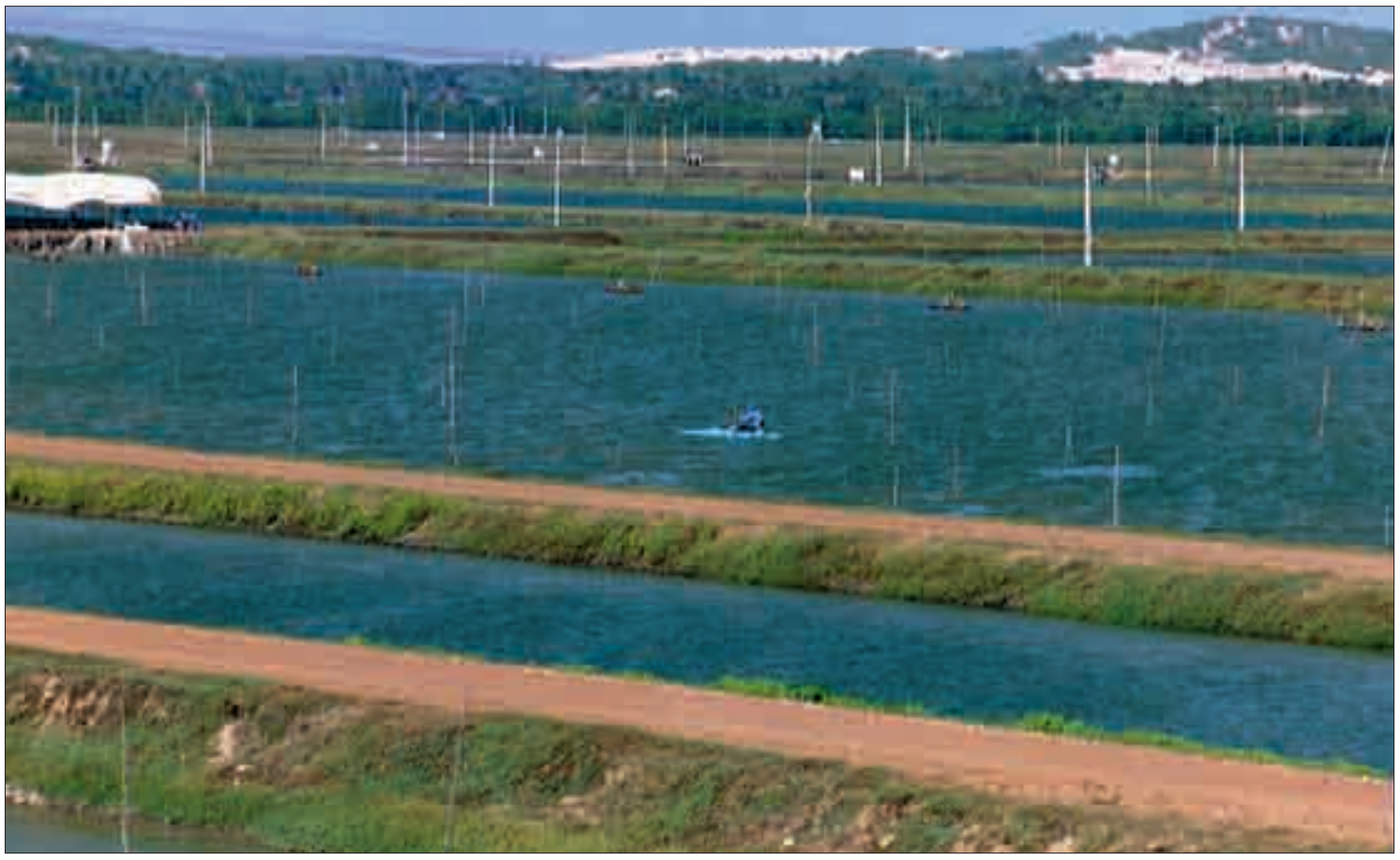
Europe is the best place in the world to sell shrimp, having overtaken the United States and Japan as the globe's largest market. While Europe may be the newly dominant player, shrimp exporters have never had more choice when it comes to viable and promising markets to sell into. The United States and Japan have long been the engines driving growth in global shrimp consumption, but their sinking economies have given new markets – including Europe but emerging countries such as Brazil and China – a chance to come into their own.

Species

Of the more than 3,000 species of shrimp known to exist, some 200 are currently under cultivation. With each passing year that number grows smaller, and the consolidation and domination of a few key species now defines the industry. Naturally, shrimp farmers have focused on the easiest-to-grow varieties that offer the biggest pay day, and the present consensus seems to be that *P. vannamei*, or white shrimp, fits the bill nicely. White shrimp now accounts for 80 percent of the U.S. market for farmed freshwater prawns, with a similarly high figure in Europe. Both markets are likely to see even less species diversity in the future.

The rapid shift toward white shrimp, driven both by its cheap cost of production and favor with consumers, has completely upended the global shrimp industry, putting some former leaders such as India in a world of trouble, and opening the door to a new generation of upstart producing countries.

In some countries production costs must be as low as $3.12 (€2.02) per kilogram to compete with vannamei – a figure that may drop even lower as production techniques continue evolving.



BLUE ACRES: Much of the global production of farmed shrip has shifted to the growing of white shirmp, which accounts for 80 percent of U.S. shrimp market.
PHOTO: VELO MITROVICH

The biggest loser in the facing of the rising tide of white shrimp has been black tiger shrimp, which are still very popular with consumers but far more expensive to produce.

Le Van Quant, president of Vietnam's top shrimp exporter Minh Phu Seafood, recently said Vietnam can kiss the growth its shrimp industry has seen goodbye if it doesn't find a way to lower production costs.

Japanese seafood giant Katokichi announced in February it would switch from black tiger shrimp to Thai vannamei for its entire line of frozen breaded shrimp products meant for domestic consumption.

In addition to the growing rift in the world of tropical shrimp, there is the age-old tug-of-war between warmwater shrimp, such as black tiger and vannamei, and coldwater prawns (often *P. borealis*) typically caught in northern waters off the coast of places such as Norway, Greenland and Canada.

Taken together, warmwater prawns have gutted the coldwater industry in recent years. Consumers are far more likely to see warmwater shrimp – which are generally far larger in size – as an alternative "meat" option, whether at restaurants, in ready-meals or at the wet fish counter.

Warmwater prawns have benefited hugely from the boom in health foods; 2008 is likely to be the first year on record when the value of warmwater prawns sold in the United Kingdom surpasses that of coldwater prawns.

Sales of coldwater prawns in the U.K. last year fell 3.3 percent to, million £183.4 million (€232 million/$370 million), while sales of warmwater prawns spiked nearly 30 percent to million £163.6 million (€207 million/$331 million).

In January, Iceland-based seafood giant Samherji announced it was closing its coldwater prawn processing plant in Akureyri, further underscoring the crisis the industry faces.

"The operation of prawn processing plants has been very difficult over the past few years, and this decision probably comes as no surprise to those who have followed the situation in the news," the company said.

There were 30 coldwater prawn processing plants in Iceland at the turn of the millennium; now there are less than five.

Even those that have managed to stay in business are now facing severe raw material shortages because there are so few vessels in operation. During the past four years Norway has seen its coldwater prawn fleet dwindle from 113 vessels to 13.

There has been endless second-guessing as to what has been behind the massive decline in global coldwater prawn sales, with fingers pointing in every direction.

A big part of the problem is the market for coldwater prawns became far too competitive earlier in the decade, and retailers and exporters could only compete on price with little to distinguish or differentiate their products.

For many years in western markets it was typical to see extreme retail markdowns in cold water prawn products. As a result, many consumers have now come to see coldwater prawns as a cheap, low-value product.

There is some hope within the coldwater prawn industry that prices, having finally bottomed out, will now head back up, and production levels once again will begin rising. Coldwater prawns have a clear advantage in terms of sustainability, with one fishery already certified by the Marine Stewardship Society (MSC), and others under assessment.

FEEDING TIME: Rising feed and other costs are pressuring shrimp producers around the world. PHOTO: VELO MITROVICH

Eco-labels and sustainability

The shrimp industry has fallen behind most of its biggest competing species when it comes to seeking environmental certification and sustainability credibility.

So far, at least, the general lack of eco-labeled shrimp products hasn't proven much of a problem for the industry, but that doesn't mean it won't face far closer scrutiny in the future.

In December, Oregon's pink shrimp (*P. jordani*) trawl fishery became the world's first prawn fishery to be certified by the Marine Stewardship Council (MSC).

There are now several others undergoing MSC assessment, including Canadian northern and west Greenland coldwater prawns (both *P. borealis*), and the North Sea brown shrimp (*C. crangon*) fishery – the first in Europe. All are expected to be certified by 2010, putting hundreds of thousands of MSC-certified shrimp on retailers' shelves each year and potentially giving the coldwater sector a massive shot in the arm.

The MSC is not alone when it comes to certifying shrimp fisheries, and indeed is unable to offer credentials of any kind to the massive farmed tropical sector.

European eco-labeler Friend of the Sea has given the nod to more than 15 shrimp fisheries, including Argentine red shrimp (*P. muelleri*), banana prawns (*P. merguiensis*), Indian white prawns (*P. indicus*) and southern pink shrimp (*P. natidis*).

Wal-Mart and other retailers have made serious commitments to selling only MSC certified seafood wild-caught products in the next few years, placing further constraints on shrimp harvesters around the globe.

There are several strong standards in place for farmed shrimp as well, though little agreement exists as to which will be the most widely adapted a decade from now.

GlobalGAP, one of the industry flag bearers, launched new shrimp aquaculture standards at the 2008 European Seafood Exposition (ESE) in Brussels.

Composed of a consortium of retailers, GlobalGAP already covers agriculture and livestock, and focuses on food safety, animal welfare, environmental concerns and social sustainability.

GlobalGAP exists alongside the Global Aquaculture Alliance (GAA), which has its own set of standards.

For the time being the two groups are in competition, but both say they hope some form of equivalency can be developed in the coming years.

Unsurprisingly, there is huge interest in such shrimp standards by western retailers.

The GAA has been warmly embraced by Wal-Mart, Darden restaurants and other major U.S. buyers.

The fact GlobalGAP already has a strong following for its salmon standards in countries such as The Netherlands could give it an edge in the European market.

Meanwhile, some companies are simply setting up their own labels, unhappy with certification schemes in place.

In September, French fresh and frozen shrimp processor Gel-Peche launched its own eco-label for Madagascan wild-caught shrimp.

The World Wildlife Fund has announced it is creating standards for responsible shrimp farming in East Africa, Central America and Mexico.

Many other schemes are either in place or in development. As much as the shrimp industry needs consolidation within its companies, it could use a bit of focus in the realm of eco-labels, particularly since the issue will only become more important to consumers in the years ahead.

Trade

Trade barriers continue to play a major role in the global shrimp trade, and are one of the primary reasons for the market's continued volatility.

The United States is the country that leans on duties and tariffs hardest with the intention of protecting small-time domestic producers; as a result, many shrimp exporters have turned their attention toward Europe and other emerging markets.

The World Trade Organization (WTO) has consistently concluded the U.S. measures are unjustified, though when it comes to making changes, America has dragged its heels at every opportunity. Things are changing, albeit slowly.

In its second – and latest – administrative review of antidumping duties, the United States slashed the duty on Indian shrimp to 1.69 percent – far lower than the one handed down in the first administrative review of 7..2 percent.

While shippers from Ecuador must now pay duties of less than 1 percent, Brazilian exporters were given rates of between 48.6 percent and 67.8 percent, one more reason for them to focus on their booming domestic market.

The U.S. has measures in place on Vietnam, Thailand and China, with varying degrees of intensit.

The fight to get them lowered seems interminable. Though it may seem as if the United States is the only major market trying to block shrimp imports, there are many other instances to be found.

In March, a row erupted in Australia when processors tried to raise the limit of antibiotics allowed in shrimp imports into the country, driving Australian shrimp farmers to the streets.

Trade disputes aside, global demand for shrimp is likely to continue to grow.

Events calendar

Aquaculture Pacific Exchange
Dates: Sept. 25-26 **Place:** Campbell River, British Columbia, Canada

Aquaculture Europe 2008
Dates: Sept. 15-18 **Place**: Krackow, Poland
www.was.org

AquaVision
Dates: Sept. 30-Oct. 1 **Place:** Stavanger, Norway
www.aquavision.org

Future Fish Eurasia
Dates: Oct. 23-25 **Place:** Istanbul, Turkey

Offshore Aquaculture in the Pacific Northwest
Dates: September 9 -10 **Place:** Newport, Ore.
http://oregonstate.edu/conferences

Dubai International Seafood Expo
Dates: October 27 – 29 **Place:** Dubai, UAE
www.orangefairs.com

4th International Aquaculture Forum
Dates: October 29 – 31 **Place:** Guadalajara, Mexico
www.panoramaacuicola.com

China Fisheries & Seafood Expo
Dates: November 4 – 6 **Place:** Qingdao, China
www.chinaseafoodexpo.com

AquaMedit 2008
Dates: November 21 – 22 **Place:** Athens, Greece
http://connect.to/pasti

People moves

Scottish Shellfish Marketing Group names new managing director
The Scottish Shellfish Marketing Group has tapped **Stephen Cameron** as its new managing director.
Cameron currently works for seafood processor Macrae Edinburgh, and has previously been factory manager at Scot Trout.
"One of my first priorities will be to examine ways of developing the business through efficiency improvements and expanding our customer and product base," Cameron said.

Harvest Select shuffles team
Harvest Select Catfish, one of America's largest, privately owned catfish processors, announced changes to its management team.
Phil Craft was named vice president of operations, and will oversee plant operations in Harvest Select Catfish facilities in Uniontown, Ala., and Eudora, Ark.
Craft has been in the catfish industry for more than two decades.
"Phil Craft has a great sense of the industry in both the value-added, and operations and supply sectors," said Randy Rhodes, president of Harvest Select. "He knows the leaders, knows the equipment and knows what we need to put in place to make our plant operations more efficient from both cost and productivity standpoints."
Russ McPherson was appointed general manager for the Eudora, Ark., facility. McPherson will focus on modernizing the plant with energy-efficient and more productive equipment.
Robert Lee will continue as plant manager for the Uniontown, Ala., facility. This facility processes more than 500,000 pounds of catfish weekly.

Entis out as CEO of Aqua Bounty
Eliot Entis is no longer CEO at Aqua Bounty Technologies, but remains affiliated with the company as a non-executive director, the company said last month.
Aqua Bounty is a biotechnology company focused on enhancing productivity in the aquaculture market.
The company says Entis "relinquished his executive duties" on May 14, AFX News reported.
Aqua Bounty said it awarded 60,606 new common shares of its stock to Richard Clothier,chairman of the board of directors, and 24,000 shares each to directors Richard Huber, William Marcus, Eric Steiner, and Dave Stevens.

MIXING OIL AND WATER: Will U.S. firms soon be able to set up offshore fish farms around old oil rigs? PHOTO: COLOURBOX

Open-ocean group backs oil rig fish farm plan

Will move add momentum to open-ocean farming in United States?

BY INTRAFISH MEDIA

The Ocean Stewards Institute says it welcomes proposed rule revision by the Bush administration to allow for open ocean aquaculture in U.S. federal waters, "provided there is adequate environmental monitoring and operational oversight by other relevant federal agencies."

The institute is a trade group advocating for the careful, rational development of open-ocean aquaculture.

The proposed new rule from the Minerals Management Service (MMS) has drawn criticism from certain environmental groups concerned about the MMS's ability to regulate such use.

However, Ocean Stewards say other federal agencies are empowered to provide the necessary regulations and MMS could well be the most appropriate agency for issuance of these leases.

"MMS is already in the business of issuing leases for Federal waters," said Neil Anthony Sims, president of the Ocean Stewards Institute and president of Kona Blue Water Farms, one of three open-ocean aquaculture companies already operating within state waters inside the United States.

While in an ideal world, we believe that NOAA should be the lead agency for coordinating development of open-ocean aquaculture, NOAA's most valuable input is in providing operating specifications to ensure that fish farms meet federal environmental standards, and minimize the potential impact on ocean ecosystems, said Sims.

"If the fish farms are to operate within the boundaries of existing oil, gas or mining leases, then MMS may indeed be the best means to address the legal issues," he said.

Sims says any such activity is already required to comply with Environmental Protection Agency oversight, to ensure no negative impacts on surrounding waters and seafloor – and says any operation must meet the requirements of Army Corps of Engineers permits, which stipulate compliance with all other applicable federal rules and regulations.

"There is no jurisdictional vacuum between state waters and the 200-mile boundary," he said. "Given the pressing imperatives for increasing supply of nutritious seafood to consumers, and maintaining a vibrant seafood industry in American harbors, we would applaud any effort to promote sustainable aquaculture in U.S. waters."

Ocean Stewards believe the federal government needs to provide opportunity for the burgeoning open-ocean aquaculture industry to develop in U.S. waters to meet the increasing demand from American consumers for safely-grown seafood.

Only with a domestic industry can U.S. consumers have some visibility into the environmental and food safety standards for offshore farms, and some control over the process, the group says.

Ocean Stewards have been actively supporting the proposed offshore aquaculture bill, which was intended to allow development of innovative aquaculture operations in federal waters. However, the legislation is stalled in Congress.

"In the absence of such legislation, existing rules could allow for adequate balancing of environmental concerns and seafood production imperatives," said Sims.

"The operational track record of Kona Blue in Hawaii and Snapperfarms in Puerto Rico has clearly demonstrated that this industry can indeed be developed with negligible environmental impact."

If this legislation was in place, we could be moving in this direction, but progress toward comprehensive legislation is stymied by those who would oppose such careful first steps, said Sims.

"So this would seem to be a reasonable alternative," he said. "There appears to be lots of existing empowering legislation & all that is now required is a will to make it work."